

ABSTRACT

A method and composition for the removal of contaminants in a gas stream used in the contamination sensitive processes of photolithography and metrology are described. The synergistic effect of a combination of an electropositive metal component, a high silica zeolite, and a late transition metal compound effects removal or reduction of the contaminates in the gas which interfere with light transmittance to the ppb or ppt levels necessary for the gas to be suitable for these uses. The removal of neutral polar molecules, neutral polar aprotic molecules, protic and aprotic alkaline molecules, acidic polar species, and neutral non-polar aprotic molecules is accomplished with the claimed composition. Depending on the type of contaminant, the composition components are each varied from 10 to 80 parts by volume, with the total composition limited to 100 parts by volume.